

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Hamilton Lake

Waterbody Segment at a Glance:

County: Caldwell
Nearby Cities: Hamilton
Area of impairment: None
Pollutant: None
Source: N/A

Note: The long term average Cyanazine level in this lake is now less than the one ug/l health advisory level. Therefore this lake was deleted from the 2002 303(d) List.



TMDL Priority Ranking: N/A

Beneficial uses of Hamilton Lake:

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health associated with Fish Consumption
- Boating and Canoeing
- Drinking Water Supply

Use that is impaired

- None

Standards that apply

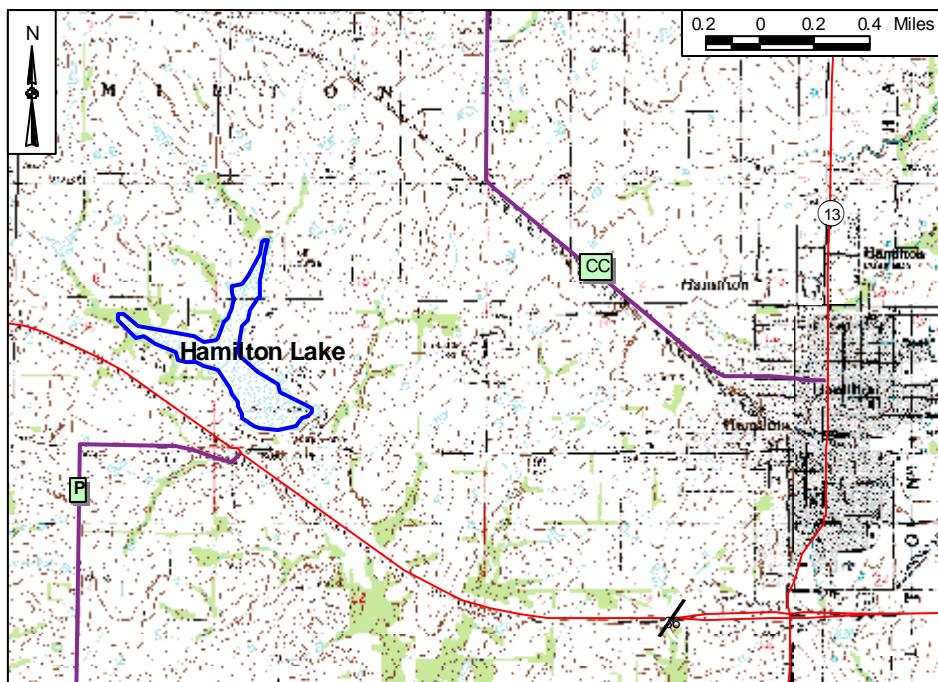
- A federal health advisory level of one microgram per liter ($\mu\text{g}/\text{L}$) cyanazine is recommended for drinking water supplies.

Background Information and Water Quality Data

Cyanazine is an agricultural herbicide that was used from 1971 to 1999, when its manufacturer voluntarily withdrew it from production. At one time, it was the fourth most widely used synthetic chemical pesticide in U.S. agriculture, applied to corn, cotton, and sorghum crops to control broadleaf weeds. It is relatively persistent in the environment, and under certain conditions will remain at significant levels in surface water for over one year. It has been identified as a surface water contaminant in 30 states, including Missouri. Cyanazine was withdrawn from use after being linked to a range of adverse health effects, including respiratory distress, cerebral palsy and impaired fetal development.

Cyanazine data for this water body are limited to finished drinking water. In 1994, Cyanazine concentrations were found to be much higher than the one $\mu\text{g/L}$ (or parts per billion) federal health advisory level. Since that time, all cyanazine levels in finished drinking water have been less than one $\mu\text{g/L}$. The current long-term average is 0.53 $\mu\text{g/L}$, so this lake was recommended and accepted for deletion on the 2002 303(d) list. The Department of Natural Resources is presently sampling raw lake water for cyanazine to monitor whether it exceeds the federal action level used in Missouri as a standard for raw water.

Map of Hamilton Lake in Caldwell County, Missouri



Average Annual Cyanazine Concentrations in Finished Drinking Water from Hamilton Lake ($\mu\text{g/L}$)

Year	Average	Range	Year	Average	Range
1994	4.03	0-9.9	1998	0	0-0
1995	0.49	0-0.99	1999	0	0-0
1996	0.18	0-0.72	2000	0	0-0
1997	0	0-0			

Source: Missouri Department of Natural Resources

For more information call or write:

Missouri Department of Natural Resources

Water Protection Program

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